

ABSTRACT

A method and system for a printing device is disclosed. The method and system comprise printing a test pattern on a print medium and generating a digital image of the printed test pattern by an imaging device. The method and system include analyzing an interference
5 pattern to measure for distortion of the print medium and calibrating the printing device based upon the measured distortion.

In a preferred embodiment, the present invention utilizes the reticle patterns, which are printed in the margins of the paper, which are measured real-time during printing. The interference or Moiré patterns created by superimposed reticles may be used to measure image
10 distortion, process direction misalignment, and misregistration caused by web distortion. The advantage of this invention is that image distortion compensation, RIP (Raster Image Processor) parameters, timing, or other printer characteristics may be adjusted on-the-fly in a closed feedback system, for high-speed textile or paper color printing, utilizing on-the-fly distortion or stretch measurement for accurate color and/or duplex images registration. In a
15 duplex printer, automatic images alignment front-to-back is obtained by combining optically or logically the two images for the evaluation of interference patterns and amount of distortion in the process and scan direction.